

John Bernstein
Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)
EC-2000-007

General Comments

I have both general and specific concerns and questions on the proposed electronic record-keeping regulation. Most of my comments will discuss the implications of the Water Division, Region 5.

The Government Paperwork Reduction Act (GPR), Electronic Signature Bill (E-SIGN) and the October 1, 2003 implementation of the Government Paperwork Elimination Act (GPEA) will make it necessary for EPA (the Agency) to implement an electronic recordkeeping law. The Agency will need to train programmatic staff, the States, Tribes and other partners on how the electronic record-keeping rule will affect their jobs. The proposed rule does not specify special software needed to report to EPA electronically. The Central Data Exchange (CDX) will receive the information from any software program.

There are two problems that need to be addressed if EPA is trying to implement an electronic record-keeping rule. First, programmatic staff must understand the importance of the rule in relation to their job. This includes understanding that even though the electronic record-keeping rule is not part of what staff may think of environmental protection, it (or something like it) will be required under GPEA.

Second, most EPA employees only have access to Word Perfect and Lotus software. Most companies use Microsoft products to conduct business. While it is true that some Division staff have access to software, including Microsoft products for special projects, the solution is not to just give staff additional software they need to do their job under CROMERRR. Does CROMERRR require programmatic staff to become computer literate to use computer software and hardware (CDX)?

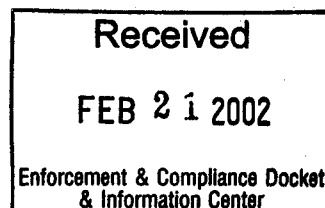
The Records and Information Management community understands that this rule is part of the changing technology in electronic records management. I believe that without the proper training of the rule and CDX, trying to implement an electronic record-keeping rule will not be effective.

EPA can also adopt parts of ISO 15489, an international records management standard. If regulated companies do business outside the United States, they may have already adopted the standard. ISO 15489 is an alternative method of developing electronic standards for CROMERRR.

Public Hearing Comments

Some comments made at the November 9, 2001 public hearing paralleled those made at the CBI public hearing in March. Industries that deal with the Toxic Substance Control Act (TSCA) and

John Bernstein
Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)
EC-2000-007



the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) regulations were skeptical of CBI data going on the CDX. Since these statutes have longer records retention periods, they were afraid that data migration issues could not be met.

While both are smaller issues of a bigger whole, the fact remains that software migration make retention periods difficult to meet. There are cases in private industry where the retention requirements are longer than EPA's disposition schedules.

Electronic Signature Requirements

As noted in the public hearing, we are in a mobile world. People work on laptops or from other electronic devices when they are not in their office. As noted earlier, some compliance and enforcement laws require timely reporting. If documents are not signed, companies can be in significant noncompliance. If LAN and e-mail userids are transportable on multiple computers, so should the ability to sign documents electronically. Electronic signature requirements should follow the EPA Records Management Application and DoD 5015.2 standards.

Electronic Reporting Devices other than a Personal Computer

In the Water Division, Region 5, the sampling and monitoring staff primarily use a variety of Global Positioning Systems (GPS). GPS models can include, but are not limited to ISCO samplers and Hydrolabs. Data from a Hydrolab can be downloaded to a Personal Computer. While both ISCO samplers and Hydrolabs can record time, the meters do not record the date. Water Quality samples are taken by dipping a bucket in the water. This process does not record neither the date nor the time.

In summary, I concur with comments made at the public hearing that found the recording of metadata other than in personal computers cumbersome, if not impossible. However, metadata is paramount to the rule.

Firewall Protection

Even though EPA has a firewall for the CDX, there may be other circumstances that prevent electronic transmission.

First, in February 2000, Representative Thomas Bliley (R-VA) asked EPA to shut down its internet to update the firewall protection. Representative Bliley delayed internet traffic, including e-mail for a period of time. If the EPA firewall is shut down for any reason, it would delay electronic transmission. Some electronic documents need to be submitted on schedule to satisfy EPA regulations. Examples of timely submissions are compliance and enforcement monitoring

John Bernstein
Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)
EC-2000-007

reports.

Second, in February, 2000, EPA Administrator Michael McCabe asked all offices to submit a confidential information summary checklist. Although this was not a comprehensive list, the

"For regulated entities that choose to keep records electronically, today's proposal requires the adoption of best practices for electronic records management."

Comments

The term "best management practices" can come from a variety of sources, including vendors and other federal agencies. How does EPA determine what best management practices to use/adopt?

The Agency is moving towards an adoption of a DoD 5015.2 approved Records Management Application (RMA). The Records Management Application Workgroup has decided to adopt the standard. The best management practices that OEI adopts for the electronic record-keeping system should conform to DoD 5015.2 standards.

"This proposal will allow for EPA approval of changes to authorized State and tribal programs to provide for electronic reporting, and EPA approval will be based largely on an assessment of the State's or tribe's "electronic document receiving system" that will be used to implement the electronic reporting provisions."

"This proposal will also allow for EPA approval of changes to authorized State and tribal programs to provide for "electronic record-keeping."

Unlike some other programs in the Agency, the Water delegations in Region 5, between EPA and the States were signed in the late 1970's-mid 1980's. To compare Water with other Divisions, RCRA modifies its state and tribal delegations on a semi-regular basis.

The Water Division in Region 5, has circumvented the delegation process by "adding" a program to the state MOA. For example, the biosolid and CAFO programs were added to the state delegations. By adding programs to the delegation packages, the Region did not have to hold

John Bernstein

Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule (CROMERRR)

EC-2000-007

statewide public hearings to reauthorize the delegations. It is the opinion of the Water Division that holding public hearings on the state delegations would be an undue burden on the Region and States.

III. Scope of Today's Proposal

B. How Does Today's Proposal Relate to the New E-SIGN Legislation?

Citation

"While EPA does plan to enhance CDX to accommodate CBI, we will first want to gain experience implementing CDX in the non-CBI arena and also take the time to explore CBI security issues with companies that submit confidential data."

Comments

Some companies at the November 9, 2001 public hearing, that work with regulated CBI statutes (mostly TSCA and FIFRA) expressed the same document security concerns raised at the March

2001 CBI public hearing. The documents under these statutes need to be maintained in a secure environment.

IV. The Requirements in Today's Proposal

2. EPA's Proposed Criteria for Electronic Record-Retention Systems. In general, EPA believes that for electronic records to be trustworthy and reliable, their corresponding electronic record-retention system must:

(1) Generate and maintain accurate and complete copies of records and documents in a form that does not allow alteration of the record without detection;

(2) ensure that records are not altered throughout the records' retention period;

Is it possible to use the RMA to ensure records are not altered throughout the retention period?

Citation

(3) produce accurate and complete copies of an electronic record and render these copies readily available, in both human readable and electronic form as required by predicate regulations, throughout the entire retention period;

John Bernstein

Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule

(CROMERRR)

EC-2000-007

Comments

The words "copy" and "copies" are used throughout the rule. Do these terms refer to original electronic records or copies of the original electronic records? It maybe a minor point, however, the word "copies" can be opened to interpretation. For example, copies (either paper or electronic) are not generally admissible in court, unless the original is lost or can not be located. The public and regulated entities do not want EPA to rely on copies of documents. Electronic copies (either originals or copies of originals) need to meet imaging standards. If the word "copies" refers to the original electronic record, the word "original" should be used.

(4) ensure that any record bearing an electronic signature contains the name of the signatory, the date and time of signature, and any information that explains the meaning affixed to the signature;

(5) protect electronic signatures so that any signature that has been affixed to a record cannot be detached, copied, or otherwise compromised;

(6) use secure, computer-generated, time-stamped audit trails to automatically record the date and time of operator entries and actions that create, modify, or delete electronic records; (An audit trail is an important element of any acceptable electronic record, for it provides an electronic record of key entries and actions to a record throughout its life cycle. Such audit trail documentation needs to be retained for a period at least as long as that required for the subject electronic records. Audit trail documentation also needs to be available for agency review.)

(7) ensure that records are searchable and retrievable for reference and secondary uses, including inspections, audits, legal proceedings, third party disclosures, as required by predicate regulations, throughout the entire retention period;

(8) archive electronic records in an electronic form that preserves the context, metadata, and audit trail; (Depending on the record retention period required in predicate regulations, regulated entities must insure that the complete records, including the related metadata, can be maintained in secure and accessible form on the preexisting system or migrated to a new system, as needed, throughout the required retention period.) and

(9) make computer systems (including hardware and software), controls, and attendant documentation readily available for agency inspection. EPA believes that where these 9 criteria are met, records required to be maintained under EPA regulations, can be kept electronically, including where they involve or incorporate signatures.

Comments

John Bernstein
Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)
EC-2000-007

I suggest that EPA get assistance from the Federal Drug Administration or other Agencies that have already implemented electronic recordkeeping requirements. Although whatever the FDA is doing to implement their rules is not a federal standard, it may help the Agency define best management practices for the Agency.

6. Additional Options

Citation

"In addition to the criteria discussed above, EPA is currently evaluating the need for additional controls for electronic records under this rule."

"EPA is also seeking comment on the general feasibility of converting existing paper documents--including litigation-sensitive records--to electronic documents, as well as comments on the strengths and weakness of existing technologies available for this purpose."

Comments

Converting existing paper documents to electronic form would be opening a can of worms. Depending on the program, it would be an undue burden to convert paper documents to electronic format. This is especially true in Superfund and RCRA. It would be easier for the Water Division, although some enforcement cases would be difficult to convert to electronic media. However, some of the ongoing projects in Region 5 are voluminous and would be as difficult as some Superfund sites to convert.

The Water Division, Region 5 is the lead on the Great Lakes Initiative (GLI). The Water Division microfilmed the first part of GLI docket, when the project began. If EPA is addressing the

question of conversion, they need to broaden their scope from just paper documents. Without a clear definition of "conversion", the public may request EPA to convert all non-paper documents (including microform) to other media on a case-by-case basis.

Citation

C. What Is the Process That EPA Will Use To Approve Changes To Authorized State and Tribal Programs Related to Electronic Reporting and Record-Keeping?

Comments

As stated earlier, program preauthorization would be too cumbersome. It can take five years or longer to hold public hearings, review comments and work with the state directors to authorize

John Bernstein

Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)

EC-2000-007

one state program delegation.

Citation

6. System Archives. EPA also proposes to require that electronic document receiving systems maintain the contents of the transaction record described above--including the copy of record--for as long as they may be needed for enforcement or other programmatic purposes. In addition we are also proposing that the system must maintain records that show, for any given electronic submission not only what information was displayed to the user during the submission process--including the instructions, prompts, data labels, etc. captured in the copy of record--but also how this information was displayed, including the sequencing, functioning and overall appearance of these interface elements. The reason is that it may be difficult to interpret what some of the submission's data elements mean if we do not know the context within which they were provided--e.g., to what on-screen display or query a "yes" was responding. Depending on exactly how the signing process is implemented, at least some of this interface information may be captured within the scope of what is bound by the signature, e.g., if the signature is applied to the entire content of the screens that are reviewed by the signatory during the signature/certification scenario. To whatever extent this occurs, the archiving of the "copy of record" would contribute to this archiving of the interface.

Comments

By reading the section, I interpret the word "archives" to mean "retention". The terms should be defined one way in CROMERRR and standardized for the RMA.

V. The Central Data Exchange (CDX)

2. The CDX Registration Process

Citation

"Upon receiving this agreement, with wet-ink-on-paper signature, CDX will recognize you as a fully-registered and authorized user. As proposed in today's rule, CDX will require a process for you to renew your registration, probably once every two years, although--corresponding to the discussion in Section IV.D.3 of this preamble--EPA seeks comment on less frequent renewals, for example, at intervals of 3, 4, or 5 years. This will include certifying that you have complied with the terms of your initial registration agreement, and, in particular, that you have not in any way compromised or delegated access to your private key, to your private CDX account, or to your CDX client software, and that you have no other evidence that any of these items have been compromised."

John Bernstein
Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)
EC-2000-007

Comments

Based on the recertification process in other programs, the CDX private key account should be certified for shorter than two years. The TSCA CBI program requires that staff be recertified annually. Local Access Network (LAN) passwords need to be changed every 90 days. The CDX private key access is more sensitive than EPA LAN access. Passwords are compromised, there is a constant threat of hackers and general maintenance issues should require a maximum of one year certification.

Even though the TSCA CBI example is primarily an EPA concern, staff who leave the Agency are suppose to sign a non-disclosure document. Staff with private key access to the CDX can be transferred from their department or leave the State Agency. I suggest an annual online training or certification for users, which can include updates to the process.

initial reason for the information request was the due to public discomfort with the way EPA was handling confidential documents. This survey examined both paper and electronic documents. Both Administrator McCabe and Representative Bliley questioned the Agency's use of the internet with respect to confidential business information.

Conversely, if a regulated entity needs to submit a document to the CDX that is due into the Agency by a certain date according to statute, but their internet connection has been disrupted (for maintenance or security precautions), the facility could be penalized by EPA for late submission. Even though the problem was with the EPA computer system, it is possible that the Agency could choose to take action against the facility. A facility must choose either paper or electronic submissions. EPA needs to recognize that the rule allows either paper or electronic submissions. A provision needs to be put into the regulation.

Regional Databases

The only regional database in Region 5, EPA is the Underground Injection Control (UIC) Well Management System. There are seven other Regions with similar databases. Every Region uses different software to maintain their information. Electronic data submitted by operators needs to be accessible to both EPA staff and the public without hardship. This will be a challenge since unlike PCS or other national databases, forms can not be designed for direct input, since all eight UIC databases use different software and different fields.

National Database Submissions

As discussed earlier, EPA can design forms for input into national databases. I will only discuss the possible implications for PCS, SDWIS and SDWIS-State. First, some states input data into a State database with an interface. Any form(s) the Agency creates for the databases needs to be compatible with any state program. The interface allows states to maintain data in other formats that can be used for staff use. The CDX needs to be able to upload data into the databases from multiple database programs. Second, any data submitted electronically that is currently on the EPA web, needs to be made available in the same time frame.

Freedom of Information Act Requests

Even though this is an electronic submission regulation for regulated facilities, it needs to address how it plans on handling Electronic Freedom of Information Act (E-FOIA) requests. If

John Bernstein

Comments on the Proposed Cross-media Electronic Reporting and Recordkeeping Rule
(CROMERRR)

EC-2000-007

companies are submitting information electronically, the public should be able to request (or in some cases download the information from the web) the data through E-FOIA. This means that the CDX and any methods of making data available need to be user friendly. GPEA will require agencies to provide more data electronically beginning October 1, 2003. Does the CDX redact data for FOIAs?

I. Overview

B What Will the Proposed Regulations Do?

Citation